Developing obstetric care pathways

CHAPTER 7

Valorisation

VALORISATION

This chapter addresses the relevance and the potential societal impact of this thesis. Collaboration between gynecologists and midwives in the Netherlands has a long history. We have a unique obstetric healthcare system which is divided in three different echelons, primary, secondary and tertiary care. In this system, autonomous community midwives provide care for women with presumed low risk pregnancies in primary care. In secondary care, clinical trained midwives, residents and gynecologists provide care for women with high-risk pregnancies and tertiary care takes place in centers with a perinatology department combined with a neonatal intensive care unit and an obstetric high-risk department for critically ill pregnant women[1].

Midwives and gynecologists have a different vision on how to execute obstetric care and have their own professional organization, as well as monodisciplinary guidelines and protocols. These differences between both professions come with challenges and barriers to overcome when a close collaboration, with continuity of care and accurate communication, is inevitable and of utmost importance.

If women remain uncomplicated throughout pregnancy, they receive midwife-led care until the postpartum period. Transfer of care from midwife to gynecologist, antenatal, intrapartum or postpartum, is a result of having one or more risk factors for pregnancy related complications, an unexpected finding and/or the occurrence of a complication during pregnancy or childbirth. The risk assessment of midwives is based on and described in the 'List of Obstetric Indications' (the VIL)[2]. This risk assessment results in a division of women having 'low' or 'high' risk pregnancies, after which their obstetric care is either provided by a midwife (low risk) or a gynecologist (high risk), respectively. A collaboration between both professions resulting in shared responsibilities by both is not facilitated in this fragmented system.

The Dutch maternity system came under heavy criticism as a result of the findings in the Euro-Peristat, that showed the Netherlands to have among the highest rate of perinatal death compared to other European countries[3]. A steering committee established by the Minister of Health Care published two reports in 2009 and 2016[4,5]. In these reports, they acknowledged the high perinatal mortality rates and promoted a more proactive approach to care for women during pregnancy and delivery. The recommendations include patient-centered and shared care, combined with shared decision-making as key concepts of the future obstetric care system[4,5]. These reports

underscored the need for organizational improvement and emphasized the importance of closer collaboration between independent midwives and gynecologists and the need for a more structured and integrated approach to obstetric care in the Netherlands. Changes in the Dutch obstetric system have been noticed over the last years, but the historical development of both professions still influences contemporary practice[6,7].

CONSENSUS ON OBSTETRIC CARE

An initiative for closer collaboration was born by the founding of the Limburg Obstetric Consortium, a partnership by obstetric healthcare professionals, which initiated the Limburg Obstetric Quality System (LOQS) project. The main goal of the LOQS project was to develop collaborative shared obstetric care pathways, to come to risk-based personalized and with it preventive care, and to structurally and timely monitor and review outcomes in order to continuously improve care and to come to one integral patient record system.

To realize these goals, midwives and gynecologists, healthcare professionals with overlapping expertise but fundamental different views and perspectives on obstetric care, needed to collaborate. This first required consensus on best care practices. To this end, we designed a novel model named the Agreement Conform Current Operational Rules and Directives-tool (ACCORD). The ACCORD-tool is based on a four-step bottom-up approach with equal participation of all involved professionals in the field. A bottom-up development strategy is thought to result in stronger supported inter-professional directives and richer decisions, because the ideas of all participating professionals can be captured in an early stage of the process[8,9]. The four steps consists of summarizing current evidence, translating evidence, based on already approved and existing guidelines, into statements pivotal for clinical decisions, send online surveys to professionals to rank these statements by their level of agreement, and finally review the survey results within a small group of representatives, chosen by their peers, to reach consensus. The consensus rate was high (92%) and the selected representatives reflected the opinion of the group they were representing in 77% of all statements.

It was the first time in our region that midwives and gynecologists worked together on this scale to improve obstetric care. Due to face-to-face meetings with representatives of midwives, gynecologists and maternity care members, we were able to discuss the content of care, but more important we could explain our

differences in view. By listening to each other, and hearing each other's concerns, we had the opportunity to take all these aspects into account, before a final decision was made regarding obstetric interventions and policy. These meetings created mutual respect, but it also became evident that both professions had to be willing to change their daily practice. The developed care pathways consist of basic care pathways for low risk women and additional recommendations for women identified with an increased risk for pregnancy related complications. The care pathways are implemented in every hospital and almost every midwifery practice in the region, they are available online and will be constantly updated with new evidence.

The described process of decision-making with help of the ACCORD-tool can be extrapolated to other regions, but also to other professions, for example multidisciplinary healthcare teams with specialists, general practitioners and/or other first line professions, but also to non-medical businesses where different professionals have to collaborate. However, every group should go through the development process themselves, since professionals must be involved from the start of the decision-making process in order to create broad support for the decisions made. In addition, statements can only be made by experts able to value what variables are cardinal in making proper decisions. Although the method requires more thoughtful effort upfront, given the large amount of generally approved and used regional guidelines in a very short time period, the gained yield afterward is tremendous as compared to more traditional guideline development strategies.

But even more importantly, clinical outcome has improved substantially, an effect not only translational to one aspect of the whole project, and therefore the resultant of all changes made within our mission.

PATIENT SATISFACTION

In this thesis we also investigated which determinants were associated with patient satisfaction. We focused on women not being perfectly satisfied with the obstetric care services they received during pregnancy and childbirth. Our results show that decreased perceived personal well-being, antenatal anxiety, and obstetrician-led care during labor were all independently associated with suboptimal pregnancy and childbirth satisfaction[10]. We hope that by using the designed obstetric care pathways, unnecessary secondary obstetric care can be prevented because of better collaboration and expectation-management and that consequently women's birthing experience may improve. Besides, we observed that one in four women experienced

mostly undetected antenatal anxiety which associated with decreased satisfaction scores. Therefore, active screening and appropriate guidance of women suffering from antenatal anxiety, might improve pregnancy and childbirth satisfaction.

RISK ASSESSMENT

In daily practice, healthcare professionals continuously assess risks. Midwives and gynecologists monitor whether there are predefined risk factors present or if complications arise during pregnancy, childbirth or the postpartum period that warrant referral from primary to secondary/tertiary care. To improve risk stratification during pregnancy, the Expect Study I started concurrently with the LOQS project, and evaluated and validated first trimester obstetric prediction models[11-13]. In the Expect Study II, the prediction models were implemented in daily practice and risk based care based on prediction models was compared with care as usual[14,15]. As a result, risk assessment in our region depends on the use of an online prediction model or if not available, on the obstetric indication list (VIL[2]) or risk factors adopted from the NICE guidelines[16,17]. Risk based care results in a significant reduction of adverse perinatal outcomes in nulliparous women. Besides improved perinatal outcomes, risk based care resulted in a considerable cost reduction without a negative impact on maternal health outcomes[15]. In the current setting, a pregnant women will follow a specific care pathway, depending on her calculated risk, which can be individually adjusted.

Besides the introduction of these first-trimester prediction models, we investigated professionals' opinion on the desired risk reduction of obstetric interventions by using the **risk matrix approach** (RMA). Risk is mostly viewed upon as probability, but risk is actually the combination of probability and impact of desired and adverse events. By using the RMA, we provided insight in the actual risk of an event, facilitating a constructive discussion with the professionals, before final decisions on new interventions and diagnostic thresholds were made. In our guideline development process, professionals introduced interventions and were willing to change policies, without reaching their predefined threshold of desired risk reduction. This indicates that decisions in guideline development are affected by several other factors than risk reduction alone, such as financial aspects and practical consequences for daily practice. Professionals should be aware of these influencing factors, when they start initiatives for future guideline development.

TARGET GROUPS

The results presented in this thesis, the bottom-up ACCORD method to develop guidelines, representative-peer agreement, factors influencing patient satisfaction and a new approach to risk assessment, could contribute to further improvement of guideline development and interprofessional collaboration. As consensus decision-making, representation and risk assessment are of interest in a lot of sectors in society, the results described in this thesis are interesting for a much larger audience than healthcare professionals alone. To spread the findings to the international research community, all studies described in this dissertation have been published or are submitted to scientific journals.

Given the tremendous pace at which we were able to improve our collaborative care, we recommend this detailed ACCORD strategy to be a consolidated part of every obstetric collaboration in the Netherlands. Moreover, as the method also regulates multidisciplinary discussion and common participation, implementation is facilitated afterwards. Active and continuous feedback towards all participants may increase the involvement and with it, realization to non-stop improvement in quality of care.

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